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CHEMCRAFT

CHEMICAL MAGIC

Mystifying Magical Demonstrations

THE PORTER CHEMICAL COMPANY, HAGERSTOWN, MARYLAND

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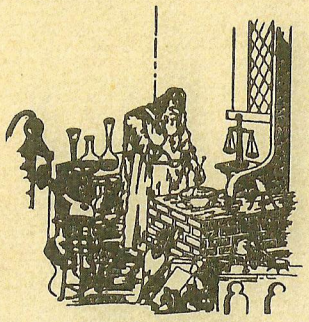
INTRODUCTION

Centuries ago, before Chemistry came to be known as a science, members of the Zoroastrian order of Magi mystified the masses with their seemingly supernatural powers.

During the period from 300 B. C. to 200 A. D. under the inspiration of Hermes Tristmegistus widely separated groups of individuals experimented with many weird concoctions, believing that they could change such base metals as iron, lead and copper into precious gold.

Since heating causes many chemical changes to take place, the most popular experiment of those ancient men was to heat or burn various substances and mixtures. Based on these experiments, the Arabic word "al" means 'the' and the Greek word "chemia" meaning 'to heat' or burn were combined, producing the word "alchemy." In those days people were very superstitious, and so the alchemists who had learned to bring about such wonderful changes in materials came to be regarded as wizards or magicians.



The ALCHEMIST

Eventually, the alchemists gave up their fruitless attempts to produce gold and endeavored to devise a mixture known as "the elixir of life." This mythical substance they believed would prolong their lives so that they could live to be as old as Methuselah.

Gradually as time progressed and as people gained more knowledge the experiments and the ideas of the old alchemists passed into the discard. However, some of the things which the alchemists attempted to do in a very crude and unscientific manner have become the basis for many modern theories. Numerous achievements of present day scientists seem like miracles of magic until we understand the scientific principles upon which they depend. The intriguing feats of modern day magicians appear weird and supernatural until you learn how they are performed. Every one enjoys being mystified, and the skillful tricks originated by such magicians as Blackstone, Thurston and Houdini never cease to hold audiences enthralled.

In the pages that followed you will find tricks in chemical magic which will provide hours of entertainment. By using simple chemical reactions you can amaze your friends by producing beautiful color changes, thick clouds of smoke without fire, diabolical odors, invisible inks and scores of other tricks which are equally mysterious. Complete directions are given for presenting a Chemcraft Magic Show including suggestions for stage settings, costumes, suitable "patter" and publicity.

SECTION I

EXPERIMENT 1—How to Change Water to Sherry Wine.

Pour 4 or 5 drops of tincture of iodine into a dry glass tumbler and allow it to become dry. The tumbler is now prepared to perform the magic change and you can proceed as follows: "Friends, I am going to change plain water to sherry right before your eyes." At this point pour some water into your prepared glass, mumble a few magic words over it, wave your hand, saying, "Presto, Change-o", and the water will immediately be changed to an amber-colored sherry wine.

To heighten the illusion you can prepare several glasses with iodine beforehand and instead of making only one glass make several glasses of sherry for your friends. Naturally, you cannot drink this wine.

EXPERIMENT 2—How to Change Sherry to Water.

To a tumbler ½ full of water add 2 measures of Sodium Thiosulfate (No. 16). Pour this solution into ½ tumbler of the sherry made in the preceding trick, and immediately the glass will be filled with a colorless liquid which you can call water.

This effect is quite startling to an audience if they do not understand the decolorizing of sodium thiosulfate on iodine solution.

EXPERIMENT 3—Pouring Red and White into the Same Tumbler.

Dissolve 3 measures of Sodium Carbonate (No. 4) in a glass full of water, and add 2 or 3 drops of Phenolphthalein Solution (No. 22). In another glass dissolve 2 measures of Sodium Bisulfate (No. 7) in 3 or 4 drops of water. Now pour the red solution in the first glass into the second. At first the red liquid will turn colorless, but as you add more it will change to red again.

EXPERIMENT 4—Pouring Grenadine and Water into the Same Tumbler.

Put 4 measures of Sodium Bisulfate (No. 7) in a glass full of water and add 2 or 3 drops of Phenolphthalein Solution (No. 22). In another glass put one measure of Sodium Carbonate (No. 4) and add just enough water to dissolve the solid.

Now pour from the first glass into the second. At first a red color will result, but as you add more of the solution from the first glass the red color will mysteriously disappear and apparently only water is in the glass.

MYSTERIOUS LIQUIDS

EXPERIMENT 5—How to Change Water to Burgundy Wine and Burgundy to Water.

Fill two tumblers half full of water and add to each 1 or 2 drops of Phenolphthalein Solution (No. 22). To the first one add also ⅓ measure of Sodium Carbonate (No. 4).

Now one glass contains a red liquid (wine) and the second glass apparently plain water. To the red liquid add 1 measure of Tartaric Acid (No. 14) or a little vinegar, and to the second or colorless liquid add ⅓ measure of Sodium Carbonate (No. 4). Now the colors have become reversed, the red liquid being in the second glass and the colorless liquid in the first.

To change them back again, add to the first glass 3 measures of Sodium Carbonate (No. 4) and the second 2 measures of Tartaric Acid (No. 14) or some vinegar.

EXPERIMENT 6—Changing Water to Blood and Blood to Solid.

Put one inch of Sodium Silicate Solution (No. 19) in a test tube and add water until the tube is ⅓ full. In another test tube put 2 or 3 drops of Phenolphthalein Solution (No. 22) and fill ⅓ full of water. In another test tube ⅓ full of water put 5 measures of Aluminum Sulfate (No. 12) and shake the tube until dissolved.

Now hold the three tubes in your hand and pour the contents all at once into a clean glass. The three colorless liquids coming together immediately form a red blood-like liquid which in a few minutes will turn into a red solid mass.

EXPENIMENT 7—A Magic Pitcher of Grenadine.

This experiment is especially good to entertain your friends:

Obtain a good-sized pitcher; a glass pitcher will not do for this experiment, as you need one which is not transparent. Place the pitcher on a tray or table, fill

it with water and arrange 5 glasses around it. In one glass put 1 measure of Sodium Carbonate (No. 4), in another 3 drops of Phenolphthalein Solution (No. 22) and in the third put 1 measure of Sodium Bisulfate (No. 7). The remaining glasses are used to make the experiment seem more complicated to the audience and need not be used unless you wish. Add a few drops of water to each glass to dissolve the chemicals. Be sure to remember which glass contains the sodium bisulfate.

Now you can show the pitcher to the audience and let them see that it contains only water. Fill each of the glasses with water from the pitcher and then pour the contents of each glass back into the pitcher, except the sodium bisulfate solution. Speak some magic words over the pitcher and then pour the contents into the empty glasses. The liquid will be wine .

Now empty all of the glasses into the pitcher again, this time including the sodium bisulfate solution, then after you have cast your magic spell over the pitcher pour the contents into the glasses for a third time, when it will be clear water.

EXPERIMENT 8—A Magic Pitcher of Bluing.

Arrange a pitcher and glasses again as in a preceding experiment. Put 1 measure of Sodium Ferrocyanide (No. 6) in one glass, 1 measure of Ferric Ammonium Sulfate (No. 21) in another, and in still another 6 measures of Sodium Carbonate (No. 4).

Fill the pitcher with water and pour into the glasses. Empty all of the glasses back into the pitcher except the one containing the sodium carbonate solution.

Now you have a pitcher of bluing. Pour this into the empty glasses and empty all of them back into the pitcher again, this time including the sodium carbonate solution.

Fill the glasses again from the pitcher and you will apparently have only water.

EXPERIMENT 9—A Magic Pitcher of Wine and Bluing.

Arrange a pitcher and 4 glasses as in the preceding experiment. In the first glass put 1 measure of Sodium Carbonate (No. 4), in the second glass a few drops of Phenolphthalein Solution (No. 22), in the third glass put 2 measures of Ferric Ammonium Sulfate (No. 21) and in the fourth glass put 2 measures of Sodium Ferrocyanide (No. 6).

Now put enough water in the pitcher to fill the glasses about half full and pour the water from the pitcher into the glasses.

Pour the contents of the two glasses back into the pitcher, say a few magic words, and then pour the liquid into the glasses again, and the result will be wine. Now pour the contents of the other two glasses back into the pitcher, say some different magic words, pour the liquid into the glasses again and it will be bluing.

EXPERIMENT 10— Magic Blue Writing Paper.

Put ½ measure of Sodium Ferrocyanide (No. 6) and ½ measure of Ferric Ammonium Sulfate (No. 21) on a smooth white piece of paper. Mix the chemicals together. Lay the paper on a smooth surface, and rub the mixture over the entire piece of paper. Now shake off the extra powder and write on the paper with water, using a clean pen. The water writes just like beautiful blue ink.

Some people will not believe that you can write with plain water, but just fix up some sheets of paper in this way and let them try it. To further mystify them have a few untreated sheets to try beforehand.

EXPERIMENT 11—Magic Black Writing Paper.

Lay a sheet of ordinary writing paper on a smooth flat surface, put ½ measure of Tannic Acid (No. 15) and ½ measure of Ferric Ammonium Sulfate (No. 21) on it and mix them together. Using a small piece of paper rub this mixture over the entire sheet. Your hands and also the paper must be perfectly dry, as the slightest trace of moisture will cause black smudges. When the mixture has been rubbed over the paper, shake off the remaining powder and write on the prepared surface with water. The written characters will be black just as if you had used black ink.

EXPERIMENT 12—Magic Writing Fluids.

Set 3 glasses in a row and number them 1, 2 and 3. Put 4 teaspoonfuls of water in each glass.

In the first glass dissolve 1 measure of Tannic Acid (No. 15).

In the second glass dissolve 1 measure of Ferric Ammonium Sulfate (No. 21).

In the third glass dissolve 1 measure of Sodium Ferrocyanide (No. 6).

Number three pieces of writing paper 1, 2 and 3. Using a clean pen, write on each piece of paper with the solution in the glass of the same number, thus paper number 1 would be written on with the solution in glass number 1. Be sure to wipe your pen carefully each time you use it for a fresh solution.

When the writing on the papers has dried, wet paper number 1 with solution number 2, using a small soft brush or sponge to apply the solution (be sure to wash the brush or sponge thoroughly when changing it from one solution to another). Wet part of paper number 2 with solution number 1, and part of it with solution number 3, wet paper number 3 with solution number 2.

The many colors in which the writing appears makes this a very mystifying experiment to show your friends.

EXPERIMENT 13—How to Prepare Magic Black Blotting Paper.

Prepare a solution of 1 measure of Tannic Acid (No. 15) in a test tube ¼ full of water. Heat the solution for a few minutes to dissolve the solid, and then write with it on a sheet of smooth white paper, using a clean pen.

While the writing is drying prepare a solution of 2 measures of Ferric Ammonium Sulfate (No. 21) in a test tube ½ full of water, and moisten a small piece of clean blotting paper and the writing will appear black just as if written with ink.

EXPERIMENT 14—A Magic Blue Blotter.

Write on a sheet of paper with a solution of 1 measure of Sodium Ferrocyanide (No. 6) in a test tube ¼ full of water. When the writing is dry, blot it with a piece of blotting paper moistened with ferric ammonium sulfate solution as in the preceding experiment, and bright blue writing will appear on the blank paper.

EXPERIMENT 15—Making Black Writing Appear with a Magic Pen.

Prepare a solution of 1 measure of Tannic Acid (No. 15) in a test tube ¼ full of water. Heat this solution for a minute or two to dissolve the solid. Now using a clean pen, write on a sheet of paper with this solution as ink.

Prepare another solution of 1 measure of Ferric Ammonium Sulfate (No. 21) in a test tube ¼ full of water. Clean your pen and follow as nearly as you can the writing which you did with the tannic acid. As you follow the tannic acid lines with ferric ammonium sulfate solution they will become black. It is very interesting to see how closely you can follow the other lines, and you can work out very nice puzzles for your friends with this experiment by writing on various parts of a sheet of paper with the tannic acid solution, then make some ferric ammonium sulfate solution, tell them to find what you have written by drawing lines around the paper until they come to your writing.

EXPERIMENT 16—Making Blue Writing Appear with a Magic Pen.

Dissolve 1 measure of Sodium Ferrocyanide (No. 6) in a test tube ¼ full of water. Use this solution as ink and write on a sheet of white paper. Now prepare a solution of 1 measure of Ferric Ammonium Sulfate (No. 21) in a test tube ¼ full of water and trace out the writing with a pen using the ferric ammonium sulfate solution as ink. This time the lines will appear blue when you go over them.

EXPERIMENT 17—Writing that Disappears by Magic.

Prepare a solution of ½ measure of Ferric Ammonium Sulfate (No. 21) and ½ measure of Sodium Ferrocyanide (No. 6) in a test tube ¼ full of water. Shake the solution thoroughly, and then, using a clean pen, write with the blue ink on a sheet of white paper.

Prepare another solution of 2 measures of Sodium Carbonate (No. 4) in a test tube ¼ full of water. Dip your pen in this solution and follow along the blue writing. The writing will disappear as you go over it with the sodium carbonate solution, making a very interesting trick.

EXPERIMENT 18—Salt Writing.

Dissolve 6 measures of common table salt (sodium chloride) in a test tube ½ full of water. Write with this solution on white paper using a clean pen. When the writing is dry, scratch over it with a soft lead pencil and the words, which you have written will show up plainly in dark lines.

EXPERIMENT 19—Blue Printing by Magic.

Put in a test tube 1 measure of Sodium Ferrocyanide (No. 6) and 1 measure of Ferric Ammonium Sulfate (No. 21). Fill the test tube ⅓ full of water and shake the solution thoroughly. Now paint a piece of white paper with the blue

solution. When the paper is entirely colored allow it to dry, and prepare a solution of 2 measures of Sodium Carbonate (No. 4) in a test tube ¼ full of water.

Now draw on the blue paper with the sodium carbonate solution and your lines will appear white, making an effect very similar to a blue print.

EXPERIMENT 20—Developing Water Writing with Ink.

Obtain a clean pen and write on a hard finish paper using ordinary tap water. Make your letters rather bold and wide and allow this water writing to dry thoroughly and then paint it with any kind of a thin ink. Next, quickly take up the ink with a blotter and note how the characters which you have written with water stand out.

This is sometimes the way secret messages are written and developed, especially in espionage work.

SYMPATHETIC INKS

Writing done with sympathetic ink is invisible until it has been developed by warming or treating it with some chemical reagent. Such inks have frequently been used by spies in time of war for conveying military secrets through enemy territory. Although their practical value is limited, these inks form the basis for a number of very fascinating magic tricks.

EXPERIMENT 21—How to Make Yellow Sympathetic Ink.

Put 3 measures of Ammonium Chloride (No. 9) in a test tube. Add ½ inch of water and shake it until the solid is dissolved. Now write with this solution and when the writing is dry heat the paper. The lines will appear yellow when the paper is just slightly scorched.

EXPERIMENT 22—Rust-Colored Sympathetic Ink.

Dissolve 4 measures of Ferric Ammonium Sulfate (No. 21) in a test tube ¼ full of water. Write with this solution.

To make the writing appear dissolve 4 measures of Sodium Carbonate (No. 4) in a test tube ¼ full of water and carefully spread this solution over the writing, using a soft brush or tuft of cotton. The writing will appear a red-brown color just as if written with iron rust.

EXPERIMENT 23—Sympathetic Ink from Lemon Juice.

Write with the juice of a lemon, using a clean pen. The writing will be invisible until it is brought out by heating the paper.

EXPERIMENT 24—Grape Fruit Juice as Sympathetic Ink.

Write with the juice of grape fruit, making the lines heavy. Upon heating, the writing will appear and if it is scorched it will turn brown.

EXPERIMENT 25—Using Vinegar as Sympathetic Ink.

Vinegar can be used as a sympathetic ink. Upon heating the writing will appear. It does not fade out on cooling.

EXPERIMENT 26—Sympathetic Ink from Milk.

Write with milk, being careful to make your lines rather heavy. Upon heating the paper, writing will appear.

EXPERIMENT 27—Iron Sympathetic Ink.

Dissolve 2 measures of Ferric Ammonium Sulfate (No. 21) in a test tube ¼ full of water. Writing done with this solution will appear brown when the paper is heated.

EXPERIMENT 28—Making Sympathetic Ink from an Onion.

Obtain some of the juice of an onion and write with it on white paper using a clean pen. When heated the written characters turn to a brown color and do not fade away. This is a very stable sympathetic ink.

EXPERIMENT 29—How to Make White Writing on Black Paper.

Dissolve 6 measures of Sodium Bisulfate (No. 7) in a test tube ⅓ full of water and dip a small piece of white paper into the solution until it is thoroughly wet. When the paper is dry write on it with a solution of 2 measures of Sodium Carbonate (No. 4) dissolved in a test tube ¼ full of water.

To bring out the writing heat the paper until it is scorched, being very careful not to set it afire. The paper will turn black and the writing will appear in white lines.

EXPERIMENT 30—Blue Writing Appears and Disappears.

Dissolve 2 measures of Cobalt Chloride (No. 27) in a test tube ¼ full of water, and write with this solution on a sheet of white paper. When the writing is dry, warm the paper gently, being careful not to scorch it, and the letters will appear in blue. To make them disappear, breathe on the writing for a minute or two, or hold it in the steam rising from boiling water.

CHEMICAL WITCHCRAFT

EXPERIMENT 31—Making a Chemical Clock.

Prepare in several glasses a series of solutions of Sodium Thiosulfate (No. 16) of decreasing strength; for example, place in the first glass 10 measures of sodium thiosulfate, in the second 6 measures, in the third 3 measures, and in the fourth 1 measure. Fill each glass half full of water and stir until the solid is dissolved.

Prepare a solution of 6 measures of Sodium Bisulfate (No. 7) in a test tube of water, and add an equal portion of this to each glass. A milky precipitate of colloidal sulfur will appear after a few minutes, but it will form in the different glasses in different lengths of time according to the concentration of the thiosulfate solution. A little experimenting makes it possible to cause the appearance of the precipitate within a specified time.

EXPERIMENT 32—A Chemical Smoke Screen.

Put 3 or 4 measures of Ammonium Chloride (No. 9) on a spoon and heat it over a flame. In a few moments it will begin to give off thick clouds of smoke which will continue until the substance is entirely volatilized.

EXPERIMENT 33—Magic Ice.

Pour ½ inch of Sodium Silicate Solution (No. 19) in a test tube and add 3 or 4 drops of water. Shake to mix the liquids .

In another test tube put 4 measures of Sodium Bisulfate (No. 7) and fill ¼ full of water. Shake it until the solid is dissolved.

Pour the liquid in the first tube into the second. The mixture will gradually "freeze" into a transparent solid, becoming hard first at the surface and gradually solidifying through the entire mass. In a minute of two the test tube can be inverted as there will be no liquid to spill.

EXPERIMENT 34—How to Make Bones Elastic.

Obtain a small chicken bone such as the wish bone. Clean it thoroughly and cover it with strong vinegar for 24 hours. At the end of this time remove the bone from the vinegar and it will be so elastic that you will be able to tie knots in it without breaking it.

EXPERIMENT 35—How to Stretch an Egg.

Obtain an egg and put it in a glass full of vinegar and allow it to stand for about 24 hours. At the end of this time feel the egg with your fingers and if it is soft and elastic, remove it from the vinegar and examine it carefully. If it is not soft at the end of this time pour out the vinegar and replace it with fresh vinegar for another 24 hours.

When the egg has become elastic it may be put in a bottle through which it originally would not pass without breaking. An elastic egg will be quite a novelty to show your friends, but be careful not to break it.

EXPERIMENT 36—Disappointing Matches.

Using a small brush, paint around the bases of the heads of matches with Sodium Silicate Solution (No. 19). Apply a thick coating of the sodium silicate solution and paint the stick for a distance of about one-fourth of an inch from the head. Allow the matches to dry and then try to light one. It will strike all right,

but the flame will go out almost immediately if you have put on enough sodium silicate solution.

EXPERIMENT 37—Blowing a Colorless Liquid to a Magic White.

Dissolve 2 spoonfuls of sugar in a glass of water and add 2 measures of Calcium Oxide (No. 20). Stir for three or four minutes to dissolve nearly all of the calcium oxide. Now let the solution stand for a few minutes until the upper portion is perfectly clear.

Pour out some of the clear upper portion into a clean glass, filling it about ¼ full. Blow through the clear liquid for several minutes, using a glass tube. The colorless liquid will gradually become white.

Here is a good chance to play a joke on some of your friends who do not know about chemical tricks. Work the above experiment for them and ask them if they would like to try it, but instead of giving them the solution with sugar and calcium oxide prepare a solution of sugar and Sodium Carbonate (No. 4). They could blow into this all day without getting the slightest change.

EXPERIMENT 38—Blowing a Red Color to a Magic White.

Prepare a solution of sugar and Calcium Oxide (No. 20) as in the preceding experiment and pour some of the clear liquid into a clean glass, filling it about ¼ full. Now add to this clear liquid one or two drops of Phenolphthalein Solution (No. 22). It will turn red.

Blow through the red liquid, using a glass tube, for four or five minutes. It will begin to change color almost immediately, passing into various shades of red and pink until it finally becomes pure white.

EXPERIMENT 39—Blowing Red to Colorless.

Place ¼ measure of Sodium Carbonate (No. 4) in a glass ¼ full of water, add one or two drops of Phenolphthalein Solution (No. 22) and the liquid will become red.

Using a glass tube, blow through this red liquid for a few minutes. It will suddenly become colorless and will look just like ordinary water.

EXPERIMENT 40—A Fading Color.

Fill a milk bottle or clear glass jar about ½ full of water and dissolve in the water ½ measure of Sodium Carbonate (No. 4). Now add 1 or 2 drops Phenolphthalein Solution (No. 22) and the water will be colored pink.

Place in a glass a teaspoonful of baking soda or washing soda and add to this a little vinegar. An effervescence will take place and carbon dioxide gas will be given off. Hold the glass over the milk bottle containing the pink solution and tip it as though you were pouring from it into the jar or bottle, but do not allow any of the liquid contents of the glass to run out. The gas which is given off, however, will pour into the bottle or jar, as it is heavier than air. Continue pouring this gas into the jar for four or five minutes and add a little more vinegar to the baking soda or washing soda if necessary.

Now cover the mouth of the jar with a saucer or lid and let it stand for a few hours. Look at it now and then after awhile you will find that the color is disappearing in spots. Before long the color will be gone without any apparent cause.

EXPERIMENT 41—A Mysterious Blue Trick.

Put about one quart of water in a clean pan and heat to boiling on the stove. While the water is heating, put a lump of starch about as big as the end of your thumb in a small pan and mix it up to a smooth paste with a few drops of water. Add a little boiling water to the starch paste and then pour the paste into the pan of boiling water. Allow to boil for a minute or two. Remove from the stove and cool.

When your starch solution is cool pour it into a milk bottle or large glass pitcher or jar. Now carefully add 2 or 3 drops of tincture of iodine, to the cold starch mixture, and watch the color form. You can now shake or stir the liquid and add a few drops more of the iodine until the desired shade of blue is obtained. By pouring the blue liquid back into the pan and heating to boiling, the blue disappears, and you have a colorless liquid again.

By putting 9 or 10 drops of tincture of iodine into a milk bottle full of water and adding a little starch mixture you can produce this same blue color. It is easy to make a trick out of this and produce a blue color by pouring two colorless liquids together.

EXPERIMENT 42—A Synthetic Cow.

Fill a glass ¼ full of water and add 8 measures of Sodium Thiosulfate (No. 16). Stir until the solid is completely dissolved.

In another glass ¼ full of water dissolve 8 measures of Sodium Bisulfate (No. 7).

Pour the solutuion of sodium bisulfate into the glass containing the solution of sodium thiosulfate and let it stand for about 5 minutes. A precipitate will form, giving the solution the appearance of milk.

This experiment is especially good for exhibition because the solution may be mixed behind the scenes and the glass of apparently clear water can then be set before the audience and after awhile it will gradually turn milky. The milk mysteriously appears without anyone touching or going near the glass.

EXPERIMENT 43—Conjuring Red from Blue.

Fill two glasses each half full of water. In the first glass put 2 or 3 drops of Phenolphthalein Solution (No. 22). In the second ⅓ measure of Ferric Ammonium Sulfate (No. 21), and ⅓ measure of Sodium Ferrocyanide (No. 6); stir the contents of each glass slightly.

In the third put a spoonful of Sodium Silicate Solution (No. 19) and 2 spoonfuls of water; stir slighlty to mix.

Now take the first glass containing the colorless liquid in one hand and the second glass containing the blue liquid in the other hand; pour them both at once into the sodium silicate solution. A glass full of bright red liquid will result.

COLORED WIZARDRY

EXPERIMENT 44—The Magic Handkerchief.

Prepare a solution of 2 measures of Cobalt Chloride (No. 27) in a test tube ¾ full of water. Obtain a small handkerchief and put it in the test tube so that it soaks up the cobalt chloride solution.

Remove and dry the handkerchief on a heater or over a stove and you will find that it is blue when thoroughly dry and warm. Here's where you have some fun.

Show the handkerchief to someone while it is blue, and then crush it between your hands and blow through it for a few minutes. It will become colorless. You can repeat this as often as you like, turning the handkerchief blue by again warming.

EXPERIMENT 45—A Color Thermometer.

Place 1 measure of Cobalt Chloride (No. 27) in a test tube and add 2 drops of water. A pink solution will be formed. Heat the tube gently over a flame and the solution will turn deep blue in color; on cooling the color again changes to pink.

This change can be repeated as often as you wish, although it may be necessary to add another drop of water occasionally to replace that which is lost by evaporation.

EXPERIMENT 46—Mystifying Opposite Changes.

Take a small strip of Congo Red Paper (No. 32) and a small strip of Blue Litmus Paper (No. 18), hold the strips side by side and drop them into a glass half full of water in which 2 measures of Sodium Bisulfate (No. 7) have been dissolved. The blue litmus paper wil' turn red and the congo red paper will turn dark blue.

Now prepare a solution of 1 measure of Sodium Carbonate (No. 4) in half a glass of water and drop the papers into this solution. The dark blue congo paper will turn back to red, while the red litmus paper will turn blue.

EXPERIMENT 47—A Contrary Solution.

Put 2 measures of Sodium Carbonate (No. 4) in a clean glass and fill it about ¼ full of water, stir well to dissolve the solid. Add 1 or 2 drops of Phenolphthalein Solution (No. 22). The liquid will be colored red.

Now dip a piece of red Litmus Paper (No. 18) into the solution just made. It will turn blue. A piece of blue litmus paper dipped into the red solution will remain blue.

This trick is very simple from a chemical standpoint but to any one not familiar with indicators it looks very strange to set a piece of red paper turned bright blue by a red solution,

EXPERIMENT 48—The Mysterious Picture.

To a test tube ¼ full of water add 3 measures of Cobalt Chloride (No. 27) and shake until it is entirely dissolved. Using a small, soft brush, paint a picture on a sheet of paper using this solution. Dry the paper over an electric heater or a stove, being very careful not to scorch it. When the paper is warm and dry, the picture will appear in blue. To make it disappear again, breathe on it for a minute or two, or hold it in the steam from a boiling tea-kettle. You can make the picture appear and disappear as often as you like.

EXPERIMENT 49—Green Violets.

Place 2 measures of Ammonium Chloride (No. 9) and 2 measures of Calcium Oxide (No. 20) in a dry test tube and heat them over a flame. Hold a blue violet at the mouth of the tube as you heat it, and the gas which comes off will turn the flower green.

If you try other kinds of flowers you may obtain some weird and unusual results.

DIABOLICAL ODORS

EXPERIMENT 50—How to Make a Disagreeable Odor.

Place 4 measures of Sulfur (No. 1) in a dry test tube and add a piece of candle about ⅛ inch long. Heat the test tube over a flame, and after a minute notice the disagreeable odor of the evolved gas. The gas is hydrogen sulfide, which has an odor resembling that encountered when rotten eggs are broken.

EXPERIMENT 51—A Magic Odor that will Revive Fainting Persons.

Place 2 measures of Ammonium Chloride (No. 9) and 2 measures of Calcium Oxide (No. 20) in a test tube. Heat this mixture over a flame for a few moments and smell the gas which is given off. This gas has the property of reviving people who have fainted.

EXPERIMENT 52—How to Produce Odor of Violets.

Mix 3 or 4 drops of castor oil with 1 measure of Sodium Carbonate (No. 4) and heat this in a test tube over your alcohol lamp flame. After a short time you will notice a white cloudy fog rising in the test tube. Remove the tube from the flame, let it cool, and cautiously smell the vapors. You should be able to recognize the scent of violets.

CHEMICAL SORCERY

EXPERIMENT 53—The Mysterious Thread of Ashes.

Fill a test tube ¼ full of water and add sodium chloride (common table salt) until no more will dissolve when the test tube is shaken. Obtain a piece of white cotton thread two or three feet long and push it down into the test tube containing the salt solution, when thoroughly wet, remove the thread and hang it up to dry.

Now tie a very small nail or button or some other small object on one end of the thread and tie the other end of the thread to a hook or projection so that it will hang clear of the wall and way from draperies or anything that might catch on fire. Light the thread toward the lower end and it will burn up, but the ash remaining will still support the object in the air.

EXPERIMENT 54—A Magic Bleeding Wound.

Prepare a solution of 2 measures of Sodium Carbonate (No. 4) in a test tube half full of water. Fill another test tube half full of water and add about 3 drops of Phenolphthalein Solution (No. 22).

Now moisten your hand or your arm with a few drops of sodium carbonate solution. When this has dried apply a small quantity of phenolphthalein solution to the same spot and the red color which is formed has the appearance of a serious wound. This experiment, of course, can be worked in a number of different ways. You can tie up your finger with a rag that has been moistened with the sodium carbonate solution and then apply a few drops of phenolphthalein solution to the rag.

To heal the wound, apply a few drops of a solution made by dissolving 1 measure of Sodium Bisulfate (No. 7) in a test tube ¼ full of water,

Be sure to wash all traces of the chemicals from your hands and arms when finished with this experiment.

EXPERIMENT 55—How to Develop an Invisible Picture.

Draw a line across the center of a sheet of writing paper and on one side of the line draw a picture using Phenolphthalein Solution (No. 22) as ink. Paint the paper on the other side of the line with Sodium Silicate Solution (No. 19). Fold the paper at the line and let the invisible picture touch the sodium silicate solution. Open the paper and the picture will appear in red lines.

EXPERIMENT 56—An Obedient Egg.

Obtain two one-quart fruit jars, and fill one of them ¾ full of water and the other with a concentrated salt solution, made by dissolving as much salt as possible in 1½ pints of hot water.

Now place an egg in the jar of water, and it will sink. Place it in the salt solution, and it will float. By remembering which jar contains the salt solution and which the water, you can make the egg obey you and either float or sink as you command.

EXPERIMENT 57—Water That Will Not Spill.

Obtain a piece of cardboard or stiff paper large enough to cover a tumbler. Fill a tumbler brimful of water and slide the piece of cardboard over it. Now hold the card in position and turn the tumbler upside down. You will find that the cardboard no longer needs to be held, for the atmosphere presses upon every square inch of it with a force of 14.7 pounds, and this is sufficient to hold it tightly against the mouth of the glass so as to prevent the water from falling out.

EXPERIMENT 58—The Mysterious Mothball.

Fill a small olive or pickle bottle ¾ full of vinegar, and add 7 or 8 measures of Sodium Carbonate (No. 4). Now drop in a mothball, and the bubbles which form on it will carry it to the surface, where it will turn around, and then sink again to accumulate another group of bubbles. This action will be repeated again and again.

SECTION II

The following additional tricks in chemical magic can be performed with Chemcraft Chemistry Outfits No. 3½, No. 5 and No. 10.

MAGIC CHANGES

EXPERIMENT 59—Pouring ink and Milk from the Same Pitcher.

In one glass place 1 measure of Tannic Acid (No. 15) and in a second glass place 2 measures of Strontium Chloride (No. 10). Add about a teaspoonful of water to each glass and stir until the chemicals are dissolved.

Now in a small pitcher or other vessel dissolve 5 measures of Ferric Ammonium Sulfate (No. 21) in about a glass of water.

When ready to exhibit pour half of this liquid into each of the first two glasses. The liquid in the first one will become intensely black like ink, and that in the second will become milky white.

EXPERIMENT 60—Pouring Red, White, and Blue from the Same Glass.

Fill 3 glasses ⅔ full of water. In the first dissolve 1 measure of Sodium Salicylate (No. 26). In the second dissolve 3 measures of Strontium Chloride (No. 10) and in the third dissolve ½ measure of Sodium Ferrocyanide (No. 6).

In another glass ⅓ full of water dissolve 5 measures of Ferric Ammonium Sulfate (No. 21). Pour some of this solution into each of the other 3 glasses and stir.

The liquid in the first glass will turn red, in the second white, and in the third blue.

EXPERIMENT 61—Pouring Red, Yellow, and Black from the Same Vessel.

Fill 3 glasses each half full of water and arrange them in a row. In the first glass put 1 measure ofTannic Acid (No. 15), in the second 5 measures of Sodium Bisulfate (No. 5) and in the third 1 measure of Sodium Salicylate (No. 26). Stir each glass until the solid is dissolved.

In a fourth glass full of water dissolve 5 measures of Ferric Ammonium Sulfate (No. 21). Stir until the solid is completely dissolved. Pour from the fourth glass into each of the other three. In the first black will be formed, in the second yellow, and in the third red. This makes a very pretty series of colors.

EXPERIMENT 62—Pouring Blue, Gold, and Red from the Same Vessel.

Fill 3 glasses each half full of water and dissolve in the first glass ½ measure of Sodium Ferrocyanide (No. 6), in the second glass 5 measures of Sodium Bisulfite (No. 5) and in the third 1 measure of Sodium Salicylate (No. 26).

In the fourth glass full of water dissolve 5 measures of Ferric Ammonium Sulfate (No. 21).

Now pour from the fourth glass into each of the other three. In the first a blue color results. In the second a golden yellow and in the third a red.

THE TRANSMUTATION OF METALS

EXPERIMENT 63—Changing Steel to Copper.

Put 1 test tube of water into a clean glass and add 8 measures of Sodium Bissufate (No. 7) and 2 measures of Azurite (No. 39). Stir well to dissolve the solids. You now have a glass containing a magic blue liquid into which you may dip any piece of bright steel for a moment and have it covered with a bright red coating of copper. A knife blade makes an excellent article to use in this experiment. It should be rinsed in cold water and dried with a soft cloth after being removed from the solution. For best results the steel article to be plated should be bright and shiny.

EXPERIMENT 64—Changing a Dime to a Penny.

Dissolve 2 measures of Azurite (No. 39) and 5 measures of Sodium Bisulfate (No. 7) in a test tube half full of water. Pour this into a clean glass and place a bright silver coin and a small piece of iron in the solution, a small nail will do very well. Be sure that the iron touches the coin. In a few moments the coin will be covered with a red coating of copper.

By means of this experiment you can easily change your friends' dimes into pennies.

EXPERIMENT 65—Changing Iron Filings to Bronze Particles.

In a test tube ½ full of water put 1 measure of Azurite (No. 39) and 3 measures of Sodium Bisulfate (No. 7). Shake this mixture thoroughly until the solids are entirely dissolved and you have a clear blue solution in the test tube.

Next add 2 measures of Powdered Iron Metal (No. 36) and again shake the test tube for a few minutes. Now let the iron metal settle to the bottom of the test tube and carefully pour off the liquid. Examine the iron metal and you will find that it is coated with a deposit of copper and looks like particles of bronze.

MYSTERIOUS LIQUIDS

EXPERIMENT 66—How Water can be Changed to Magic Milk.

Fill 2 glasses half full of water and dissolve in one 2 measures of Manganese Sulfate (No. 24). In another dissolve 2 measures of Sodium Carbonate (No. 4).

Now pour the contents of one glass into the other and a thick white precipitate will be formed, making it seem as though the glass were full of milk.

EXPERIMENT 67—Changing Water to Wine and Wine to Milk.

Put 3 measures of Sodium Carbonate (No. 4) in a glass and fill the glass ¾ full of water, stirring to dissolve the solid. In another glass put 2 drops of Phenolphthalein Solution (No. 22), an din a third glass put 3 measures of Strontium Chloride (No. 10) and 3 measures of Sodium Bisulfite (No. 5). Pour the solution in the first glass into the second, and the result will be wine. Pour the wine into the third glass, stir vigorously for a few seconds, and it will change to milk.

EXPERIMENT 68—A Magic Pitcher of Milk and Ink.

Obtain a pitcher and four glasses. In the first glass place 3 measures of Mangenese Sulfate (No. 24), in the second glass 3 measures of Strontium Chloride (No. 10), in the third glass 2 measures of Tannic Acid (No. 15), and in the fourth glass 2 measures of Ferric Ammounim Sulfate (No. 21). Add a few drops of water to each glass, and pour four glasses of water into the pitcher.

Pour from the pitcher into each glass, and then pour the contents of the first two glasses back into the pitcher. Fill them again from the pitcher, and this time they will appear filled with milk. Now pour the second pair of glasses into the pitcher and when you pour again from the pitcher, the liquid will be ink.

MAGIC PAPERS AND INKS

EXPERIMENT 69—Magic Red Writing Paper.

Mix on a sheet of white paper ½ measure of Sodium Salicylate (No. 26) and ½ measure of Ferric Ammonium Sulfate (No. 21). Rub this mixture over the surface of the paper, using a small sheet of paper for rubbing. Write on the prepared paper with plain water, and the result will be beautiful red writing just as if you used red ink instead of water.

EXPERIMENT 70—Colorless Ink Writes in Three Color.

Make up three solutions as follows:

First, 1 measure of Sodium Ferrocyanide (No. 6) in a test tube half full of water.

Second, 1 measure of Sodium Salicylate (No. 26) in half a test tube of water.

Third, 1 measure of Tannic Acid (No. 15) in half a test tube of water.

Using a soft brush, paint these sloutions in streaks on the same piece of paper. Be careful to have each streak just touch the one next to it.

When the sheet of paper is thoroughly dry, write on it with a solution of 2 measures of Ferric Ammonium Sulfate (No. 21) in a test tube half full of

water. The writing will be a different color on each streak, giving a many-colored writing on the same sheet of paper. Many interesting effects can be obtained by combining the streaks in various ways, or painting the streaks diagonally across the paper, or painting the solutions on in circles.

EXPERIMENT 71—Magic Writing in Different Colors.

Make up three solutions as follows:

First, 1 measure of Sodium Ferrocyanide (No. 6) in a test tube half full of water.

Second, 1 measure of Sodium Salicylate (No. 26) in half a test tube of water.

Third, 1 measure of Tannic Acid (No. 15) in half a test tube of water.

Using a soft brush, coat a piece of white writing paper with solution number 1, a second with solution number 2, and a third piece with solution number 3. Be sure to clean your brush well each time you use it for a fresh solution.

Set the three pieces of treated paper aside to dry and prepare a solution of 2 measures of Ferric Ammonium Sulfate (No. 21) in half a test tube of water.

When the sheets of paper are thoroughly dry, write on each one with the solution of ferric ammounium sulfate, using a clean pen. The same liquid writes a different color on each sheet of paper.

EXPERIMENT 72—Blue Writing with Iodine.

Put ½ measure of Ferric Ammonium Sulfate (No. 21) and ½ measure of Sodium Bisulfate (No. 7) into a test tube ¼ full of water and add a few drops of Sodium Iodide Solution (No. 23). Shake the tube well, and the solution will become brown because it contains free iodine.

Using a perfectly clean pen write on a starched color or cuff with this iodine solution. At first the writing will be blue, but in time it may turn brown. The solution will also write blue on paper which has been coated, or sized, with starch.

EXPERIMENT 73—Red Writing Appears When Blotted.

Write on a piece of paper with a solution of 1 measure of Sodium Salicylate (No. 26) in a test tube ¼ full of water. When the writing has dried, blot it with a piece of blotting paper moistened with ferric ammounium sulfate solution as before, and this time bright red writing will appear on the blank paper.

EXPERIMENT 74—Making Red Writing Appear with a Magic Pen.

Dissolve 1 measure of Sodium Salicylate (No. 26) in a test tube ¼ full of water and write with this solution on a piece of white paper. Prepare some ferric ammonium sulfate solution by dissolving 1 measure of Ferric Ammonium Sulfate (No. 21) in a test tube ¼ full of water. Follow the writing with a pen dipped in ferric ammonium sulfate solution and the lines will appear red.

EXPERIMENT 75—A Magic Pen and Many-colored Writing.

Prepare in separate test tubes the following solutions: 1 measure of Tannic Acid (No. 15) in a test tube ¼ full of water; 1 measure of Sodium Ferrocyanide (No. 6) in a test tube ¼ full of water; 1 measure of Sodium Salicylate (No. 26) in a test tube ¼ full of water. Write on a clean sheet of paper with first one and then the other of these solutions making various designs, and having the writing done with one solution cross the writing done with the other solutions.

Next prepare a solution of 1 measure of Ferric Ammonium Sulfate (No. 21) in a test tube ¼ full of water. Dip your pen in this solution and follow along the writing which you did on the paper. The writing will appear in various colors and you will find it a very interesting and fascinating experiment.

SYMPATHETIC INKS

EXPERIMENT 76—How to Make Light Red Sympathetic Ink.

Dissolve 2 measures of Sodium Ferrocyanide (No. 6) in a test tube ¼ full of water. Write on a white paper with the solution.

Place in another test tube 1 measure of Azurite (No. 39), 3 measures of Sodium Bisulfate (No. 7) and ¼ test tube of water. Shake the tube gently until the solution stops foaming and becomes clear. Now spread this solution over the writing, using a soft brush or a small tuft of cotton, and it will appear in clear red characters.

EXPERIMENT 77—Dark Red Sympathetic Ink.

Dissolve 1 measure of Sodium Salicylate (No. 26) in a test tube ¼ full of water. Write with this solution.

In another test tube dissolve 2 measures of Ferric Ammonium Sulfate (No. 21) and 3 measures of Sodium Bisulfate (No. 7). Shake the test tube gently until the solution stops foaming and becomes clear. Now spread this solution over the writing, using a soft brush or a tuft of cotton and clear red characters will appear.

EXPERIMENT 78—How to Make Dark Olive Green Sympathetic Ink.

Place in a test tube 1 measure of Azurite (No. 39), 3 measures of Sodium Bisulfate (No. 7) and 1 measure of Ammonium Chloride (No. 9). Fill the tube ¼ full of water and heat to dissolve the solids.

Write with this solution, using a clean pen. When the writing is dry, heat the paper over a flame and the invisible writing will appear a dark olive green.

EXPERIMENT 79—How to Make Blue Sympathetic Ink.

Dissolve 1 measure of Azurite (No. 39) and 3 measures of Sodium Bisulfate (No. 7) in a test tube ¼ full of water. Write with this solution and when the lines have dried, prepare a solution of 1 measure of Sodium Carbonate (No. 4) in a test tube containing ½ inch of water. Paint the sodium carbonate solution over the writing, using a brush and the lines will appear a blue color.

CHEMICAL WITCHCRAFT

EXPERIMENT 80—Making a Miniature Snowstorm.

Dissolve 2 measures of Strontium Chloride (No. 10) in a test tube nearly full of water.

In a second test tube put 2 measures of Sodium Carbonate (No. 4) and add ½ inch of water. Heat until the sodium carbonate is dissolved.

Carefully pour the contents of the second test tube into the first. A thick white precipitate will form at the top of the tube and as the particles slowly settle to the bottom the effect is very much like a miniature snow storm.

Sodium carbonate and strontium chloride react forming sodium chloride and strontium carbonate. The latter is not soluble in water and hence separates out of the solution in solid particles.

EXPERIMENT 81—Chemical Color Chase.

Arrange 5 dry glasses in a row. Put in the first ½ measure of Ferric Ammonium Sulfate (No. 21), in the second ½ measure of Sodium Salicylate (No. 26), in the third ½ measure of Sodium Ferrocyanide (No. 6), in the fourth a spoonfull of Sodium Silicate Solution (No. 19), and in the fifth 2 or 3 drops of Phenolphthalein Solution (No. 22).

Fill the first glass with water and stir to dissolve the solid. Pour the contents of the first glass into the second, the second into the third, and so on. Stirring each time a change is produced will help bring out the color.

EXPERIMENT 82—Color Clots.

Put a spoonful of Sodium Silicate Solution (No. 19) in a glass and add 2 spoonfuls of water. Mix well.

Fill a test tube half full of water and add 3 measures of Strontium Chloride (No. 10). Shake the tube thoroughly. Pour a few drops of this solution from the test tube into the glass containing the sodium silicate solution. Beautiful white clots of precipitate will form.

Add 1 or 2 drops of Phenolphthalein Solution (No. 22) to the remaining strontium chloride solution. Pour a few more drops from the test tube into the glass. This time red clots of precipitate will form among the white ones.

EXPERIMENT 83—Streamers from a Magic Rainbow.

Fill a large glass pitcher, milk bottle or similar vessel of clear glass with water. Allow it to stand for ten minutes where it will not be shaken so that the water will become perfectly quiet.

Now drop 1 or 2 measures of Mixed Dyes (No. 30) on the surface of the water. Watch closely the beautiful color effects which follow.

MAGIC FLAGS

EXPERIMENT 84—"Old Glory" Appears by Magic.

Draw a flag on a sheet of white paper in light pencil lines, laying out the

blue field and stripes. Now make up the following solutions:

First, 1 measure of Sodium Ferrocyanide (No. 6) in a test tube half full of water.

Second, 1 measure of Sodium Salicylate (No. 26) in a test tube half full of water.

Third, 1 measure of Ferric Ammonium Sulfate (No. 21) in a test tube half full of water.

Paint the part of the flag which is to be blue with the first solution (sodium ferrocyanide). Paint the stripes which are to be red with the second solution (sodium salicylate).

Allow the work to dry thoroughly and then paint over the whole flag with the solution of ferric ammonium sulfate, using a soft brush or a small wad of cotton. The flag will come out in beautiful red, white and blue pattern of "Old Glory."

EXPERIMENT 85—The "Tri-Color" of France by Chemical Magic.

Draw a flag in light pencil lines and lay out three wide strips running parrallel to the staff or the short way across the flag. Paint the first of these stripes with sodium ferrocyanide solution prepared as in the preceding experiment. Leave the second strip blank and paint the third with sodium salicylate prepared as in the preceding experiment.

Paint over the whole flag with ferric ammonium sulfate solution as in the preceding experiment. The result will be the blue, white and red flag of France.

EXPERIMENT 86—The Flag of Holland.

Draw another flag in lead pencil, making three stripes, running the length of the flag. Paint the top stripe with sodium salicylate solution, leaving the middle stripe blank, and paint the bottom stripe with sodium ferrocyanide solution. When the painting is dry go over the entire flag with ferric ammonium sulfate solution. Prepare all the solutions as in the preceding experiment.

This time the flag of Holland results with three stripes, the first red, the second white and the third blue.

EXPERIMENT 87—Changing Magic Rainbow Streamers into a Floating Garden.

Dissolve 2 measures of Sodium Carbonate (No. 4) in a glass full of water. Allow the glass to stand until the water becomes perfectly quiet and then add 1 or 2 measures of Mixed Dyes (No. 30). Wait until the streamers of color from the dyes have reached the bottom of the glass, then add 2 measures of Aluminum Sulfate (No. 12) without stirring. As the alumnium sulfate dissolves it forms a precipitate with the sodium carbonate. This precipitate absorbs a large amount of the color from the streamers and carries it to the surface of the water. The changing colors and the motion in this experiment makes it very beautiful and interesting to watch.

SECTION III

The following additional tricks, in chemical magic can be performed with Chemcraft Chemistry Outfits No. 5 and No. 10.

MAGIC CHANGES

EXPERIMENT 88—Pouring 10 Different Colors from the Same Pitcher.

Arrange 10 dry glasses in a row. In the first put 1 measure of Ferric Ammonium Sulfate (No. 21) and 1 measure of Tannic Acid No. 15).

In the second put 3 measures of Strontium Chloride (No. 10) and 3 measures of Sodium Carbonate (No. 4).

In the third put 1 measure of Sodium Salicylate (No. 26) and 1 measure of Ferric Ammonium Sulfate (No. 21).

In the fourth put 3 measures of Cobalt Chloride (No. 27) and 2 measures of Sodium Carbonate (No. 4).

In the fifth put 1 measure of Calcium Oxide (No. 20) and 1 or 2 drops of Phenolphthalein Solution (No. 22).

In the sixth put 3 measures of Sodium Ferrocyanide (No. 6) and 3 measures of Nickel Ammonium Sulfate (No. 13).

In the seventh put 1 measure of Ferric Ammonium Sulfate (No. 21) and 4 measures of Sodium Carbonate (No. 4).

In the eighth put ⅓ measure of Sodium Ferrocyanide (No. 6) and ⅓ measure of Ferric Ammonium Sulfate (No. 21).

In the ninth put 2 measures of Cobalt Chloride (No. 27) and 1 measure of Sodium Ferrocyanide (No. 6).

In the tenth put ¼ measure of Mixed Dyes (No. 30).

Now get a large pitcher of water and fill the glasses, stirring each one slightly, after you have filled them all. The water will turn a different color as it goes into each glass. The effect is startling as well as beautiful.

EXPERIMENT 89—How to Change Water to Milk, and Milk to Ink.

Put 2 measures of Ferrous Ammonium Sulfate (No. 17) in a glass ¾ full of water. Stir to dissolve the solid. In another glass put 2 measures of Strontium Chloride (No. 10) and add a few drops of water to dissolve the solid. In the third glass put 2 measures of Tannic Acid (No. 15) and a few drops of water. Next pour the solution in the first glass into the second and the result will be milk. Pour the milk into the third glass and ink will result.

EXPERIMENT 90—Red Letters Appear When Heated.

Put 2 measures of Sodium Bicarbonate (No. 25) in a test tube. Add 2 drops of water and 2 drops of Phenolphthalein Solution (No. 22). Shake this mixture until it forms a paste-like substance. Using a clean pen, write with the mixture on a piece of white paper. The writing will probably appear slightly pink in color. When heated the writing will come out a deep red color, forming a contrast with the original faint pink.

EXPERIMENT 91—A Magic Soda Fizz.

Put 3 measures of Nickel Ammonium Sulfate (No. 13) in a test tube ⅓ full of water and warm for 2 or 3 minutes to dissolve all of the solid.

Add to the hot solution 1 measure of Sodium Carbonate (No. 4). When the action has stopped add to the solution 2 measures of Sodium Bisulfate (No. 7). The soda water is now finished, but it will not do for drinking purposes.

EXPERIMENT 92—A Column of Colors.

Put ½ inch of Sodium Silicate Solution (No. 19) in test tube and add water until the tube is ⅓ full.

In a second test tube make a solution of 2 measures of Cobalt Chloride (No. 27) and ½ inch of water. Heat the solution for a minute to completely dissolve the solid.

Pour a very few drops of the sodium silicate solution from test tube number 1 into a third clean test tube and add an equal amount of cobalt chloride solution from the test tube number 2. The two liquids together should not equal more than ½ inch in the test tube. A blue precipitate will form.

You are now finished with the cobalt chloride solution contained in test tube number 2, so that the tube may be cleaned and used for making up the next solution.

A few drops of a solution of 1 measure of Strontium Chloride (No. 10) in ½ inch of water should now be added to the blue precipitate and an equal amount of sodium silicate from the solution in test tube number 1. This will form a layer of color on top of the blue.

EXPERIMENT 93—The Disappearing—Reappearing Color.

Mix 1 measuer of Starch (No. 41) with a few drops of water, pour this mixture into a test tube full of warm water, and heat for a minute. If the solution becomes stiff on cooling add water until it is fairly fluid.

When the solution is perfectly cold add to it a few drops of starch test solution, made by adding ½ measure of Ferric Ammonium Sulfate (No. 21), ½ measure of Sodium Bisulfate (No. 7), and a few drops of Sodium Iodide Solution (No. 23) to a test tube ¼ full of water.

A deep blue color will be obtained. Now heat this blue solution to boiling and the color will entirely disappear, leaving a clear solution. On cooling the blue color will reappear. This change may be repeated as often as desired.

EXPERIMENT 94—How to Make an Unpleasant Odor.

Put 5 measures of Sodium Bisulfate (No. 7) in a test tube ¾ full of water. Shake it to dissolve the solid. Add to this solution 2 measures of Iron Sulfide (No. 43) and after a few moments a strong smell of rotten eggs will be given off.

EXPERIMENT 95—A Silicate Garden.

Put 1 teaspoonful of Sodium Silicate Solution (No. 19) and 3 teaspoonfuls of water in a clean glass. Stir slightly to thoroughly mix the liquids. Now take 1 measure of Alumnium Sulfate (No. 12), 1 measure of Nickel Ammonium Sulf e (No. 13), 1 measure of Ferrous Ammonium Sulfate (No. 17), 1 measure of Ferric Ammonium Sulfate (No. 21) and 1 measure of Cobalt Chloride (No. 27) and drop them all into the water glass solution.

Watch. In a few minutes trees, grass and all manner of chemical vegetation will begin to sprout and grow. In a short time the liquid will be filled with variously colored chemical plants and trees. The thickness of the jungle may be varied by the amount of reagents used. The glass should be set in a place where it will not be shaken.

SECTION IV

HOW TO PRESENT A CHEMCRAFT SHOW

The tricks in chemical magic described in this manual are best suited for entertainment where the audience can be seated close to the performer and his assistant.

The following directions are intended to be suggestive only and need not be followed in every instance. It is not necessary that you make-up as an Alchemist and go through all of the acting described, but appropriate patter and gestures will add very much to the interest and impressiveness of your entertainment. If possible, consider the nature of your audience before deciding on the character of your program and plan your stage setting accordingly.

Suggestions for stage settings (see Section V) are based on the program described in this Manual, Section VI the performer taking the role of an Alchemist.

PLANNING YOUR PROGRAM

Any club, group of boys or girls, or just two or three experimenters can easily stage a Chemcraft Magic Show.

The first thing to do is to decide just what tricks and experiments you are going to include in your program. You will have to decide who will be the Alchemist, who shall be the assistant, where the show will be held, and how to arrange your "theatre," stage settings, and various other details. When this is done, try all of the tricks that you are going to use, being sure to select experiments that can be done with your outfit. In the event that the experiment calls for a reagent that you do not have included in your Chemcraft Outfit it will be necessary to substitute another trick. Have your assistant work with you so that he is familiar with everything that you do. By arranging "cues" your performance will go along smoothly and without awkward pauses.

PUBLICITY

When the above details have been taken care of, you are ready to set a date and prepare the advertising for your show. If you choose, you can appointed one individual to have complete charge of publicity. In such an event he will be responsible for making the posters and tickets and to seeing that the advertising is displayed in conspicuous places.

SOUND EFFECTS

Weird sounds produced back-stage at various points during the performance will greatly add to the dramatic presentation of your show. All sound effects should be produced by your assistant.

A call bell or dinner gong which will sound a single note will prove very useful. You can have your assistant strike it back-stage upon some prearranged signal whenever you wish to arrest the attention of your audience.

SPIRIT RAPPINGS

Spirit rappings can be imitated by tapping on a half cocoanut shell with a small wooden mallet.

RUSHING SPIRITS

By having an electric fan blow against ten or fifteen inch strips of coarse paper tied together at one end and attached to the guard of the fan, a sound will be produced which suggests 'spirits' rushing through the air.

THUNDER

To produce the sound of rumbling thunder hold a piece of light sheet metal approximately 24" x 30 " along one of the 24" edges and shake it vigorously. It may be well to cover the edge to be held with adhesive tape. This will protect your fingers from the sharp edge.

Dried peas allowed to fall a short distance on to a small drum head will produce the sound of falling rain.

CRACKLING FLAMES

A sheet of cellophane (6 inches square) if crumpled and uncrumpled between the hands will produce the sound of crackling flames.

AEOLEAN HARP

By allowing the breeze from an electric fan to blow across or against a violin, guitar or any other stringed instrument, a sound resembling that of an Aeolean Harp will result.

SHRIEKING SPIRITS

The siren whistles which can be bought at any 5c and 10c store if blown unexpectedly will invariably cause shivers to run up and down the spine of your audience and produce the sound of eerie spirits in distress.

Various unusual noise-making devices are familiar to most boys and can be used to advantage when producing a magic show. However, as a usual thing, faint noises are very much more appropriate than very loud ones.

PROPERTIES

The following additional "properties" or equipment are usually needed when putting on a magic show.

1. A source of heat is necessary when doing the tricks with sympathetic inks. An ideal source is an electric toaster placed on your work table. Arrange so it can be turned on easily when needed. Be carfeul not to place any cloth or paper around the toaster as this may become ignited when the toaster is hot.
2. Two glass pitchers of one pint and one quart capacity respectively should be close at hand.
3. Ten to twenty heavy drinking glasses or plain jelly glasses which will not break easily are also necessary.
4. Unless a sink with running water is handy in the same or adjoining room, a bucket should be close at hand (behind the table) in which to pour waste liquids after completing your experiments.
5. Pleasant odors obtained by burning ordinary incense prior to the opening of the show (or during the performance) will help to heighten the air of mystery in your dimly lighted "theatre."

COSTUMES

It is highly desirable, although not necessary that the Alchemist and his Assistant be costumed for the occasion. It will make the show appear more professional and help the performers to keep from laughing while enacting their mystic roles.

ALCHEMIST'S GARB

A black or red dressing gown is suitable for the main garment. The sleeves should be wide but held at the elbow with a light rubber band. The forearm should be bare to the elbows inside the flowing sleeves of the gown. A mystic design of some sort (see illustration) should be painted on cardboard and sewed on the front of the robe. It should be made of either red, blue or black on a silver or white background.

The head should be covered with a turkish towel formed to resemble a turbin worn by a Hindu Prince or Rajah. If the Alchemist wears a long flowing robe his feet will not be visible, but if the robe does not reach to the floor the magician should wear sandals or bedroom slippers.

ALCHEMIST'S ASSISTANT—SLAVE

The assistant should be "made-up" as an Ethiopian slave. His costume can be similiar to that worn by the Alchemist (omitting the turban) or he can wear an old burlap sack with holes cut out for his head and

arms. His face and arms should be blackened with burned cork which will wash off easily when the performance is concluded. The accompanying illustration will give you a good idea of how your Slave should look when properly costumed. When addressing him, he should be referred to as your Slave. If you prefer, the blackening of the face and arms can be omitted and the Assistant can be called "Apprentice" instead of slave. By all means assign him a fantastic name such as Allah, Kola, Rota or any foreign-sounding word.

PATTER AND GESTURES

Suitable "patter" is a very important thing in every magic show. In the section following an entire program is given which contains correct "patter" to precede, to accompany and if necessary follow each trick. Become conversant with the difficult and unfamiliar words included in the patter and do not be afraid to make changes to suit your conditions and desires. The only thing to remember is, be sure that any changes you make are of an appropriate nature.

It will do no harm to have this book open before you on the table but do not make your reference to it so obvious that its presence becomes conspicious.

Always speak SLOWLY and IMPRESSIVELY with DRAMATIC pauses at the proper places. Ignore any questions, remarks or other attempts to interrupt you. Remember that your gestures must always be in keeping with the character that you have assumed. Remember that being natural will win you success and applause much sooner that ridiculous over-acting.

Upon being applauded after completing a trick, bow to the audience. Bowing can be done in one or two ways; either place the palms of each hand on opposite shoulders and bend slowly from the waist, or mesh your fingers and place your palms outward in front of your forehead when bending from the waist.

Every magician uses some type of wand with which he makes suitable gestures accompanied by appropriate patter. A wand can be athin round stick (a piece of ¼ inch dowel pin) a baton, or a piece of bessemer rod. Magicians often describe imaginary mystic symbols in the air with their wands before performing a particularly mysterious trick.

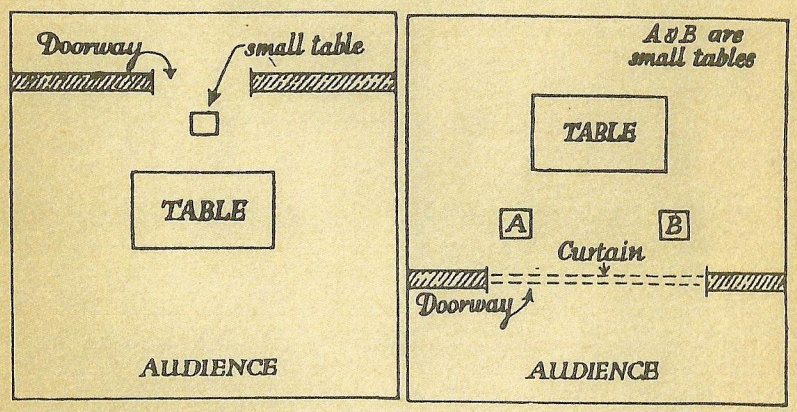
HOW TO HANDLE PERSONS WHO INTERRUPT

The best way to handle scoffers and persons who try to interrupt during the show, is to ignore them. They will soon become tired of talking to themselves and be quiet. A scoffer is usually a booster when he is talking about a trick you have just performed.

SECTION V

STAGE SETTINGS

A raised stage although advantageous is not necessary. In any case the Alchemist should have a good-sized table upon which to perform his tricks in magic. The table should be of such a height that you can work while standing behind it. Cover it with several thicknesses of newspaper to prevent any spilled liquids from penetrating to the surface. Cover the newspapers with an old piece of oilcloth, a worn out sheet, or an old tablecloth. A white cover makes it very easy for your audience to distinguish mysterious color changes which take place as you perform some of the tricks in chemical magic.



The table should be placed near a doorway and the front and sides should be draped with a cloth or piece of brown wrapping paper to conceal the bottom portion. A small table or stand placed just in rear of the large table will provide a convenient place to set tumblers, pitchers and reagents until ready for use. Figure I illustrates a way in which to arrange your stage in case you do not have an assistant, while Figure 2 shows another method which makes use of a certain effect that furnishes a "back stage" or "wings" provided you are going to have an assistant.

LIGHTING

An easy method of obtaining a dimly lighted stage (or "theatre") can be produced by using dark orange or red-tinted bulbs in the ceiling fixtures or chandelier. An additional light, such as an ordinary desk light should be handy to illuminate the beautiful color changes for your audience. You may be able to arrange a stiff paper or fiber-paper cone over the light in such a manner that white disk or light is always present on a certain portion of your white table covering. When test tubes or other vessel containing beautifully colored liquids are held in this "spotlight" they can be plainly seen against the background.

To advertise the show several attractive posters approximately 15" by 22" should be made on white cardboard. These can be painted with show card colors, water colors or lettered with crayons. Colors most suitable are blue, dark red, dark green or black. If you care to, more than one color can be used on the same poster. Information on the poster should include the name, date, place, time and price of admission together with various features of the show. To aid you in this manner a sample poster has been sketched showing a simple lay-out and the type of "ballyhoo' which might be used to advantage.

After the posters are made and placed in conspicious places (windows of houses close to the street, on a big tree in your front yard or a stake driven in your front lawn) you are ready to make the tickets.

MAKING THE TICKETS

Tickets should be cut from a sheet of light weight colored cardboard, tag board or cover stock. They should be approximately 2" x 3" and contain the necessary information to attract and direct people to your Magic Show. See the accompanying illustration. All lettering should be done with black India ink.

SALE OF TICKETS

You will do well to designate one of your friends as Business Manager. Make him responsible for the distribution and sale of tickets as well as the collection of the money. In most cases the business manager and publicity manager can be the same individual.

In deciding on an admission charge, consider approximately how many persons you will be able to seat in your "theatre." Based on this number you can determine how much you will have to charge for admission. Suppose you can seat 30 persons. If you play to a capacity house at 10c per ticket you will take in $3.00 while at 5c $1.50.

Everyone connected with the active production and management of the show should sell his share of the tickets. Have everybody go after this matter and encourage them to sell all that they possibly can.

SECTION VI

Continuity and Patter For a Complete Chemcraft Magic Show

ADVANCED PREPARATION

After arranging your theatre stage settings, lighting, a large table upon which to perform the tricks, all necessary glasses, pitchers, test tubes and reagents; and having had a dress rehearsal or two you are ready to stage your show.

PROCEDURE

After your audience has taken its seats and it is time for the "curtain to go up" have your assistant dim the lights in the theatre. Immediately following this, have him strike a dinner gong three times to prepare the audience for your entrance. Walk slowly out to the center of the stage and place yourself behind the table facing the audience. Allowing a moment to pass for applauding, and after a few moments pause, speak slowly and impressively as follows:

"Fellow mortals you should know that it is not the custom of those wise in magic to reveal their secrets to the common rabble. Nevertheless, I will today permit no ridicule or unbelief. If, therefore, be there any amongst you that is an unmightly science, Alchemy.

One word of caution I must speak. Know ye that the spirits of the Alchemists of Old, by whose aid I these wonders do perform, are proud spirits and will permit no ridicule or unbelief. If therefore, be there any amongst you that is an unbeliever in the mysteries of science, I beg that he now withdraw, lest ill results betide him here."

(Pause for an instant and then proceed as follows:)

"I now invoke the Spirits of the ancient Alchemists."

(Make several mystic gestures with your magic wand and repeat the following:)

"Quintessence of Creation, Emanation All Powerful, exert thy magic power of transformation on the unseen spirits of the dead.

Ghosts of the Past, summoned from the depths of space, I seek from out your number the Spirit of Alchemy. I bid you stay Hermes, Paracelsus, Alchemists of Old. The others may depart."

(During this recitation place one of your hands over your eyes and facing to the right appear to be struggling to gain connection with the spirit world. Remain in this position for a few moments after which your assistant should produce the effect of rushing spirits as described in Section V).

You have now arrived at the proper point to demonstrate your mystic powers and your assistant should quietly enter from off stage and select three glasses from the small stand, and carrying them on a tray, place them on the table before you. These glasses should be lightly marked 1, 2, and 3 so that you can distinguish them from each other. In No. 1 half full of water there should be placed 1 or 2 drops of Phenolphthalein Solution (No. 22. In No. 2 half full of water there should be dissolved 1 measure of Sodium Carbonate (No. 4). In No. 3 place 1 tablespoonful of clear vinegar. All of these things should be prepared beforehand so that you can immediately perform the transformation as soon as the tray containing the glasses is placed on the table before you.

Raise your wand magestically above your head and describe a magic symbol saying:

"Paracelsus the Great, they power I implore, By the incantation of this Magic Chemcraft Symbol I invoke thy aid."

Picking up the No. 1 glass in your left hand and the No. 2 glass in your right hand, and slowly pouring the contents of one glass into the other. Immediately the two colorless liquids will become the color of Burgundy Wine.

(Hold the glass in which the color change has taken place in your spotlight or before a piece of white cardboard for the audience to see the magic color. When the applause has subsided again wave your wand and picking up glass No. 3 repeat:)

"Come Spirit, and through thy magic power change this beautiful Burgundy Wine back to water."

Empty the vinegar into the glass of red liquid and immediately the glass will be filled with a colorless solution. Again hold the tumbler in the spotlight for the audience to observe the mysterious change which you have wrought.

Bow to the audience in recognition to the applause.

Immediately your assistant should enter and going to the small stand place ten glasses on a tray together with a large pitcher of water. These glasses need not be marked but should be prepared beforehand according to the following directions:

In one place 1 measure of Ferric Ammonium Sulfate (No. 21) and 1 measure of Tannic Acid (No. 15).
In the second put 3 measures of Strontium Chloride (No. 10) and 3 measures of Sodium Carbonate (No. 4).
In the third put 1 maesure of Sodium Salicylate (No. 26) and 1 measure of Ferric Ammonium Sulfate (No. 21).
In the fourth put 3 measures of Cobalt Chloride (No. 27) and 2 measures of Sodium Carbonate (No. 4).
In the fifth put 1 measure of Calcium Oxide (No. 20) and 1 or 2 drops of Phenolphthalein Solution (No. 22).
In the sixth put 3 measures of Sodium Ferrocyanide (No. 6) and 3 measures of Nickel Ammonium Sulfate (No. 13).
In the seventh put 1 measure of Ferric Ammonium Sulfate (No. 21) and 4 measures of Sodium Carbonate (No. 4).
In the eighth put ⅓ measure of Sodium Ferrocyanide (No. 6) and ⅓ measure of Ferric Ammonium Sulfate (No. 21).
In the ninth put 2 measures of Cobalt Chloride (No. 27) and 1 measure of Sodium Ferrocyanide (No. 6).
In the tenth put ¼ measure of Mixed Dyes (No. 30).

Upon having your assistant place the tray containing the glasses and pitcher of water on the table before you, address your audience as follows:

"To the true Alchemist the simple transformation which I am about to perform are mere child's play, but to you common mortals they no doubt seem mysterious and strange. See, in this pitcher I have water (lift the pitcher up). By the weird powers of the spirits of the ancient Alchemists I shall pour this water into the glasses before me, and in each produce a different color."

Pour into the various glasses as you talk, filling each about ½ full. Lift each glass in turn and hold it before the spotlight. After the applauding instruct your Slave remove the glasses and pitcher and while he is getting together the necessary materials for the next trick, address your audience as follows:

The mighty art of Alchemy for freedom stands. Behold and while the opportunity affords you may feast your eyes upon the forbidden fruit of the vine."

While the above is being recited your assistant should place 3 glasses before you on the table. These should be marked 1, 2, and 3 and should previously be prepared as follows:

In No. 1 place 3 measures of Sodium Carbonate (No. 4) and add water until the glass is ¾ full. In No. 2 place 2 or 3 drops of Phenolphthalein Solution (No. 22) and in No. 3 place 3 measures of Sodium Bisulfite (No. 5) and 3 measures of Strontium Chloride (No. 10). When the liquid in No. 1 is poured into glass No. 2 the result will be a beautiful red wine. Continue with the following patter.

"Lest some intemperate individual in your midst should too freely imbibe the fermented juices of the grape I will turn this wine to milk."

By pouring the contents of No. 2 into No. 3 glass the wine will be changed to a milky fluid.

Bow to the audience in response to their applause after which instruct your Slave to dispose of the glasses and their contents.

Instruct your Slave to bring you the necessary glasses prepared for performing the trick in which you produce patriotic colors of red, white and blue. While he is doing this recite to the audience the following patter:

"America is the land of the free and the home of the brave. 'Tis found on the freedom that soars to heights undreamed of by base mortal minds. I call upon you, O Spirits of the Alchemists, to produce the 3 colors which are the symbols of our glorious land."

This trick will require 4 glasses which are marked 1, 2, 3, and 4 respectively. Into No. 1 ⅔ full of water dissolve 1 measure of Sodium Salicylate (No. 26). In No. 2, ⅔ full of water dissolve 3 measures of Strontium Chloride (No. 10), while in No. 3, ¾ full of water dissolve ½ measure of Sodium Ferrocyanide (No. 6). In No. 4, ⅓ full of water dissolve 5 measures of Ferric Ammonium Sulfate (No. 21).

Wave your magic wand over the glasses and pour a little of the solution of No. 4 glass into each of the others thus producing the alternate colors of red, white and blue.

Acknowledge the applause by bowing twice to the audience.

The next experiment is based on the use of vinegar as a sympathetic ink. A very entertaining trick can be worked out according to the suggestions which follow.

In doing this experiment you can call upon your audience to participate in the show. The results can be made amusing as well as mysterious. It will be necessary that five or more sheets of paper be prepared previous to the show and in the manner described. All sheets should be approximately 6" x 8" and a lead pencil line should be drawn exactly through the center of the sheet. In the upper left hand corner should be placed the letter "Q." With a clean pen dipped in vinegar write such expressions or similar ones in the space provided beneath the pencil line. Be sure to use plenty of vinegar on your pen point.

1. When the seventh day of the seventh month
   Of the seventh year falls on
   Friday the 13th, BEWARE

2. Your best friends won't tell you
   But always take advice from a red bearded man

3. If at first you don't succeed,
   Look it up and be sure to read

Early to bed and early to rise
Makes you healthy, wealthy and wise

4. Brush your teeth twice a day,
Never fish during the month of May,
Write your name on a slab of clay,
Eat ice cream on your birthday

5. Never walk beneath a ladder,
Shun all evil like an adder,
Goodness gracious what does it matter?

When dry these will be invisible on the paper, but when heated the invisible writing will appear and it will not fade upon cooling.

When you come to the place in the show where you are going to use the sheets prepared as described above connect the electric toaster and addressing the audience, repeat the following:

" 'Tis not for mortal man to look beyond the bounds of time and space, but through the aid of those who dwell within the nebulous spaces of the fifth dimension I will permit you to receive messages from the great beyond.
"Oh Spirit of the ancient Alchemists, lend thy aid to those here assembled who seek secrets of the future."

Pause—and then continue as follows:

"My Slave will pass among you and distribute blank sheets of paper upon which you will write any questions concerning the future which you might wish to know. Kindly write legibly opposite the letter "Q" and I will implore the spirits of the ancient alchemists to answer them for you."

Have your assistant pass the slips among the audience and after the questions have been written have him collect them and return them to you on the stage. After he has delivered them, make several mysterious gestures over the papers as they lie before you on the table and repeat the following patter:

"Mighty Hermes, Father of Alchemy, exercise thy potent power in behalf of these poor mortals.. By the incantation of thy Servant who invokes thy aid search the future and record thy answers on these sheets of paper."

At this point pick up one of the sheets of paper and hold it against the hot toaster. Should it not prove convenient or practical to use an electric toaster the slips of paper can be heated just above the flame of your alcohol lamp. This will cause the invisible writing to appear, and after you have read it to the audience it should be returned to the writer by your Slave to keep as a souvenir of the show. Repeat the above procedure with all the slips of paper that you have at hand.

As soon as the last of the spirit messages have been read and returned to the audience you can immediately go into the next trick by repeating the following patter:

"This water into ice I will turn. Come O Spirit of Tristmegistus through thy weird powers allow thy Servant to cause this water to become ice."

Have your slave in the meantime carry from the small table and deliver to you 2 test tubes half full of liquid which have been prepared according to the following directions.

In one of the test tubes place one inch of Sodium Silicate Solution (No. 19) and add 6 or 7 drops of water. In another test tube place 8 measures of Sodium Bisulfate (No. 7) and fill ½ full of water. Shake the test tube until all of the solid is dissolved.

Upon receiving the two test tubes from your Slave hold them up for your audience to see, and then pour the contents of one into the other. Pick up your wand and make several mystic passes over and under the test tube at the same time mumbling some weird words. Continue this until the mixture gradually begins to "freeze" into transparent solid. It will become hard at the surface and gradually solidify throughout the entire mass. In a minute or two the test tube can be turned upside down and should be held in the spotlight so the audience can see that you have mysteriously turned the water into magic ice. Continue with the following patter:

"For centuries the honest tillers of the soil have attempted to learn the secrets which I am about to reveal to you, but alas, thus far their efforts have been in vain. Slave, I command that you bring me the necessary glasses that I may show these earthly mortals how easy it is to change water into milk."

At this point your assistant should transfer the 2 glasses (which have been prepared previously) from the small stand to your work table. Place in one 2 measures of Manganese Sulfate (No. 24) and in the other 2 measures of Sodium Carbonate (No. 4). Fill each glass ½ full of water.

Lift the 2 glasses from the table and hold them up for the audience to see that they contain only clear water. Set one on the table and pick up the magic wand and make several symbols over the glass. Then pick up the glass which you set down and pour its contents into the other glass. As soon as the reaction takes place repeat:

"Behold, My Friend, rich creamy milk where before was only water."

Bow to the audience to acknowledge the applause.

After your assistant has carried away the 2 glasses which were used in the last trick, instruct him to bring you a moth ball, the parcel containing 8 or 10 measures of Sodium Carbonate (No. 4) (Previously measured out), and the small olive or pickle bottle that has been filled ¾ full of vinegar. Have him place these before you on the table. Immediately drop the moth ball into the vinegar where it will drop to the bottom, then dump in the sodium carbonate from the parcel. Hold the jar up before you with your left hand, and with your right hand pick up your wand. Make several mysterious gestures over and under the bottle and repeat the following patter:

"By the power of Hermes vested in me I command that this white ball arise to the surface."

As soon as the moth ball is dropped into the liquid bubbles will form on it and after a moment carry it to the surface where it will turn around and again sink to the bottom of the vessel. At once it will begin to accummulate another covering of bubbles causing it to rise to the surface again. This action will occur several times. Time the movements of your wand to conform to the rise and fall of the moth ball.

Set the vessel containing the moth ball to one side and command your slave to bring you a handful of small, clean, dry chicken bones (such as the wish bone). These will have to be accumulated over a period of time so that you will have enough to make the trick impressive.

One of the bones which you do not show the audience until later should be kept separate from the rest, or if you prefer, mixed with the other bones but marked in such a manner that you can readily pick it out from the rest. This particular bone should be cleaned thoroughly and immersed in vinegar for 48 hours previous to your show. At the end of the first 24

hours remove it from the vinegar and test it to see whether or not it is becoming elastic. Unless it is pliable like rubber immerse it in fresh vinegar and allow it to remain there until it becomes elastic and pliable.

Select one of the bones from the pile which the Slave has placed on your table and holding it at arm's length before you, demonstrate to the audience how easily it can be broken.

To make this trick more effective you can have your assistant produce the sound of shrieking spirits (see Sound Effects in Section V) as you break each bone. Break several of them and then repeat the following patter:

" 'Tis blasphemous these bones to break
Excruciating pains the spirits hate
So, the brittleness from these bones I'll take."

Nonchalantly select the prepared bone from the midst of the other bones and holding it aloft in your hand, describe the mystic Chemcraft symbol over it with your wand held in the right hand.

Then lower the bone into a tumbler ¾ full of water to which has been added 1 measure of Mixed Dyes (No. 30) and repeat such expressions as "Bula Bula, E Pluribus Unium, Hilu, Ala Baba, Ga Sunt Hite." Remove the previously made pliable bone and repeat the following:

"I shall now demonstrate to you one of the secrets of Alchemy which has for centuries been handed down from father to son. You have just been shown that bones are brittle, and yet in the twinkling of an eye through the power of this mystic fluid, I shall before your eyes tie in this bone a knot."

Proceed to tie a knot in the bone which has been made flexible by soaking in vinegar beforehand (dipping the bone in the mixed dye solution has no effect on its pliability and is done only for effect). When the applause has died down, hand it to one of the persons in the audience and allow him to pass it among the spectators so that they can see that it is really pliable.

As the examination of the flexible bone continues, the attention of the audience should be arrested by the persistence of the spirit rappings coming from the backstage (see Sound Effects Section V). These are produced by your assistant, and when the audience becomes slightly apprehensive about the sounds, gaze toward the ceiling and with one of your hands shading your eyes and the other placed behind your ear as if listening repeat:

"Ah! the signal from the spirit realm warning me that these revelations must cease. I feel the urge for me to return to the spirit world from whence I have derived the power to perform these mysterious feats of magic."

At this point pause and then continue:

"However, before I depart I shall wish the air of that super agency, fire, with which my predecessors have accomplished such wonderful results, produce for you thick white clouds of magic smoke."

Having thus spoken strike a match and light your alcohol lamp, then lift your spoon into which you have placed 4 or 5 measures of Ammonium Chloride (No. 9) and with your left hand hold it over the flame of your alcohol lamp. With your right hand grasp your want and describe several mysterious gestures over the spoon until thick white clouds of smoke arise.

As soon as the smoke begins to form your assistant standing backstage

should produce the sound of rumbling thunder (see Sound Effects Section V).

As the rumbling of the thunder continues and the smoke cloud continues to belch from the spoon repeat to the audience the following final patter:

"In thunder, in lightning, and in rain
I do not know when we shall meet again
I can no longer with you remain
So must depart from this terrain."

Amidst the cheering and applause from the audience graciously bow and make a dignified exit to the dooway leading to the backstage. If after your exit the applause continues you should return and acknowledge a "curtain call" by once more bowing to the audience.

* * * * *

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